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DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
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IN REPLY REFER TO:
EMC 13-064

CERTIFIED MAIL

March 13, 2013

Loretta J. Fuddy, A.C.S.W., M.P.H.
Director of Health
State Department of Health
Environmental Management Division
Clean Water Branch
919 Ala Moana Boulevard, Room 301
Honolulu, Hawaii 96814-4920

Dear Ms. Fuddy:

Subject: Draft Permit for the National Pollutant Discharge Elimination System (NPDES) Application for Kailua Regional Wastewater Treatment Plant, Kailua, Island of Oahu, Hawaii
Permit No. HI 0021296

Attached for your consideration and response are the Department of Environmental Services (ENV) comments on the draft subject permit sent under cover of State of Hawaii, Department of Health letter 02056PKP.13, dated February 20, 2013. Although the draft permit is dated February 20, ENV did not receive the draft until March 4. On March 6, 2013 the Department of Health granted an extension for comments to be submitted from March 6, 2013 to March 13, 2013. In reviewing the draft, ENV has identified specific errors and requests that the Department consider delaying release of the public draft permit to provide for more careful review and correction of the errors in this draft. We would welcome the opportunity to work expeditiously with the Department of Health to resolve these issues in a manner consistent with the available data and environmental standards.

I certify that under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

2013A693

If you have any questions, please contact Cleveland (CJ) Jaramilla of our Monitoring and Compliance Branch, Division of Environmental Quality, at (808) 768-3253.

Sincerely,

Lori M.K. Kahikina, P.E.
Director

Enclosure: ENV comments on draft Kailua Regional Wastewater Treatment Plant NPDES Permit

Page	Comment
Comments for Kailua Draft Permit and Public Notice Date for the NPDES Application, Permit No. HI 0021296	
Cover Page	• Please remove "Designate" from Ms. Lori M.K. Kahikina, P.E., Director ~~(Designate)~~
Page 1	• Permittee is City and County of Honolulu, Department of Environmental Services. • Applicable regulations should be as of July 2012
Page 3 and 4, Part A.1, first three tables	• Loading units are all in lbs/day. However, the DMRs utilize kg/day units. Please ensure consistency between the permit and the DMR templates. • DOH has not conducted the required triennial public hearing and review to update the Water Quality Standards. As a result, the standards applied in the draft permit rely on outdated data (e.g., 20 year old research for water quality criteria, rather than more recent studies) and improper measures (e.g., separate nitrogen requirements, rather than a single total nitrogen assessment).
Page 3, Part A.1, 1st Table	• Footnote 2: There are no "analytical test" results for flow reporting. • BOD_5 and TSS mass-based effluent limits should be based on the plant design flow rate of 15.25 MGD and not 12.7 MGD.
Page 3, Part A.1, 2nd table	• pH unit of "MGD" is incorrect. Replace with correct "s.u.", which is the abbreviation for the standard unit. • The current NPDES permit specifies an allowable pH range in the effluent from 6.0 to 9.0 s.u. The proposed permit has a pH limit of 7.0 to 8.6 s.u. which is inappropriate because it applies the HAR § 11-54-6 open coastal waters criteria to the effluent. • Incorrect dilution factors used to derive limits. As reflected in EPA guidance, dilution should be based on recent data. • The State Toxics Control Program: Derivation of Water Quality–Based Discharge Toxicity Limits for Biomonitoring and Specific Pollutants (STCP) specifies the procedure for calculating the average dilution using the design flow rate. STCP guidance provides that average conditions are used when establishing human-health standards based upon fish consumption for carcinogens. • Incorrect Water Quality Standards used to derive effluent limits. The draft permit fails to account for DOH's conclusions, in 2009 when revising the Water Quality Standards, regarding standards necessary to protect human health.

Page 3, Part A.1, 2nd table (Cont'd)	• Chronic Toxicity units not needed to be reported for the whole effluent toxicity test. The result of the test is either a pass/fail. • Use design flow of 15.25 MGD for mass-based effluent limitations on Chlordane and Dieldrin. • The DOH permit failed to consider average dilution and enterococcus die-off in calculating enterococcus limits. There is no basis for imposing enterococcus limits as receiving water data indicated there were no exceedances of enterococcus at the edge of the mixing zone. • Chlordane/Dieldrin limit should be removed. The State of Hawaii revised the State Water Quality Standards for Chlordane/Dieldrin in recognition of new studies regarding the carcinogenicity of toxic pollutants and submitted them to EPA for approval in February 2010. The RPA failed to consider the updated criteria that DOH has concluded are more appropriate state standards and the average dilution in calculating Chlordane/Dieldrin limits. • Oil and Grease effluent limits: There is no technical basis to support the NPDES permit effluent limit. • Chlorophyll monitoring is not appropriate for the effluent. Total Nitrogen and Total Phosphorous monitoring are appropriate to address chlorophyll concerns in the receiving waters. • Footnote 2: Delete "s" prior to "...described in..." • Footnote 7: The 1997 reference to enterococci sampling is obsolete; replace with Method 1600 Reference EA821-R-09-016 dated December, 2009. • Footnote 7 specifies that effluent monitoring for enterococci shall consist of one grab sample collected between 12 noon and 3:00 p.m. There is no technical basis for imposing this time restriction. • Footnote 10: Please specify the submittal dates for the semi-annual monitoring of the pollutants. • Remaining Pollutants: sample type should be "Grab" for volatiles and "24-Hour Composite" for all other parameters.

Page 4, Part A.1, 3rd Table	• Current wastewater treatment technology does not allow wastewater to be treated to the specified nitrogen limits for ammonia nitrogen and nitrate + nitrite. The proposed limits are orders of magnitude lower than what is typically required of secondary and advanced treatment facilities with nitrogen removal. The nitrogen limits should be deleted. • Delete reference to Part A.3 from Table 2, footnote 3, because sampling is conducted 1/Month. • Delete reference to Part A.3 from Table 3, footnote 2, because sampling is conducted 1/Month.
Page 4	• A.4 - Remove reference to chlorophyll a monitoring in the effluent. See comment on chlorophyll for page 3.
Page 6, Part B	• The *T. gratilla* WET test has been updated for the Hawaiian sea urchin. The proper reference is the 2012 standard.
Page 7, Part B.3, First sentence at top of page	• Delete "(100 percent effluent)" from the sentence. "100 percent effluent" assumes no zone of mixing exists for the effluent discharge to the receiving waters, which is inaccurate.
Page 7, Part 4.b, last sentences	• Chronic IWC for Outfall Serial No. 001 should be less than or equal to 0.75 x Control mean response.
Page 8, Part B.4, Section h	• *T. gratilla* test is one hour; pH drift is already accounted for in the method's QC. The freshwater method referenced in the paragraph does not apply. Delete entire paragraph.
Page 11, Part B.7.a.	• Change "percent mean response at IWC" to "percent mean effect at IWC"
Page 12, Subsection C.1.a.(2)	• Delete because the shoreline and nearshore enterococcus monitoring requirement in E.1 and E.2 is five times per calendar month. • Page 15, Section D.1. The plant's design flow is 15.25 MGD and not 12.7 MGD.
Page 16	• Latitude and Longitude coordinates for Shoreline Water Quality Monitoring have been rounded and do not include the nearest 10th decimal place. This will result in inaccurate sampling locations. Permit should include latitude and longitude coordinates accurate to the 10th decimal place. Please see attached "Receiving Water Quality Monitoring Program, Mokapu Ocean Outfall" for correct coordinates. • Footnote 1 would require 6 samples per month to be taken depending on calendar day in which sampling is initiated for a given month when the required monitoring frequency is five times per month. Suggest that Footnote 3 from Part C.1. (Page 13) of current permit is used instead, "…Samples shall be equally spaced

Page 16 (Cont'd)	at six (6) day intervals or unequally spaced at five (5), six (6), seven (7), or eight (8) day intervals, provided that the total period covered is between 25 and 30 days".
Page 17	• The draft permit does not specify ZID monitoring stations. The ZOM is used to determine compliance with State water quality criteria (ZID also referenced on page 18) and is consistent with Page 15. D.1, which establishes that the ZOM boundary is where the assimilation of secondary treated wastewater discharge occurs. ZID stations establishment and water quality compliance are associated with a 301(h) effluent discharge and therefore does not apply to this draft secondary treatment permit • A table of the existing nearshore monitoring stations, locations, and coordinates should be included. Please see the attached "Receiving Water Quality Monitoring Program, Mokapu Ocean Outfall" for nearshore monitoring stations, locations, and coordinates. • Due to existing hazardous conditions, the City cannot establish any nearshore sampling stations within 300 meters of the shoreline. The existing nearshore sampling stations must remain in their current locations. • Footnote 1: Same comment from table on page 16, above.
Page 18	• Latitude and Longitude coordinates for Offshore Water Quality Monitoring have been rounded and do not include the nearest 10th decimal place. Please see same comments for Shoreline Monitoring on page 16, above. • Footnote 1: Same comment from tables on pages 16 and 17, above. • Remove "land based microwave positioning system" and replace with "GPS or DGPS". Remove "mini-ranger".
Page 19	• Footnote 1: Please correct to read "Grab samples shall be collected at each station *between a point* 1 meter below the surface, mid-depth, *and a point* 2 meters above the bottom". • Footnote 2: Listed as Footnote 1 (again). Update language per comment above. • First paragraph following table should read, "Inability to conduct offshore monitoring…"
Page 20, Part E.6.e	• Please clearly define what items constitute "survey results".
Page 23	• The City requests that the annual report submittal deadline of February 28 be changed to March 31 to be consistent with the City's other NPDES permits with submittal deadlines of March 31. This change would

	also be consistent with the Sand Island Draft Permit.
Page 28-29	• Paint Filter Test Method is 9095B • General comment: The City would like to include provisions in the permit to allow outside generated sludge to be discharged downstream of the treatment plant's influent sampler so it can be treated directly by the plant's solids handling facility. The City will develop a system to monitor this sludge.
Page 30	• Disposal at MSW Landfill should only require the Paint Filter Liquids Test, not groundwater monitoring or certification regarding aquifer contamination.
Page 35, Part I.1.c(1)	• Insert the following wording "or the most recent method approved by EPA".
Page 35, Part I.1.c(2)	• Confirm that in addition to "total recoverable", the "dissolved" fraction must be analyzed per the State Water Quality Standards. ENV currently does both analyses.
Page 36, Part I.1.c(4)(6), 2nd paragraph	• Correct the sentence "Analytical results at or above the laboratory's MDL…" by replacing "MDL" with "ML".
Page 38	• Correct Shoreline Watering Quality Monitoring due date reference to "128th day of the month following completed reporting period" • Remove requirement for ODES (or equivalent) Data Submission Report. ODES is obsolete. Data is being submitted via STORET.
Appendix 1, Page 1	• Analytical Methods: Recommend replacing all with citation "in accordance with 40 CFR 136". • The correct analytical method for Mercury should be "Method 3112B" (SM 3112B)".
Appendix 1, Page 2	• Analytical Methods: Recommend replacing all with citation "in accordance with 40 CFR 136". • All Dichlorobenzene isomer methods listed on this page should be "624", not "625".
Appendix 1, Page 3	• Chloroform is misspelled (missing 'C'). • Cyanide method obsolete, should use Standard Methods 4500 CN. • Asbestos: what does "Not required unless required" mean?
Appendix 1, Page 4	• Dioxin (TCDD) method should be 1613B or in accordance with 40 CFR 136
Appendix 1, Page 4	• Analytical Methods: Recommend replacing all with citation "in accordance with 40 CFR 136"

Comments for FACT SHEET - NPDES Application, Permit No. HI 0021296	
Page 1	• Correct Date • Remove Designate reference
Page 3	• Remove Designate reference • Authorized persons to sign are the positions of Director, Deputy Director, and Second Deputy Director. • Paragraph A.1 is incomplete. Additional information was provided on 12/3/12, 12/4/12, and 12/13/12.
Page 5, Section B.5.a, Tables F-2 and F-3	• The description for Tables F2 and F3 should clarify that reported data reflects the highest reported value over the measured period, not "representative monitoring".
Page 6 Table F-3	• Permit limitation is 2163 kg/day not 2136 kg/day.
Page 11	• First sentence should read "maximum receiving water concentration" instead of "maximum of effluent concentration"
Page 11-12	• The State Toxics Control Program: Derivation of Water Quality–Based Discharge Toxicity Limits for Biomonitoring and Specific Pollutants (STCP) specifies the procedure for calculating the average dilution using the design flow rate. STCP guidance provides that average conditions are used when establishing human-health standards based upon fish consumption for carcinogens. • The RPA for ammonia is based on the conclusion that assimilative capacity does not exist. There is no effluent data to support that conclusion. The rationale for imposing a limit fails to consider the state of current wastewater treatment technology. • The Reasonable Potential Analyses uses an incorrect methodology to establish WQBELs.
Page 15 through Page 17 (Chlordane/Dieldrin Section)	• The State of Hawaii revised the State Water Quality Standards for Chlordane/Dieldrin in recognition of new studies regarding the carcinogenicity of toxic pollutants and submitted them to EPA for approval in February 2010. The RPA failed to consider the updated criteria that DOH has concluded are more appropriate state standards and the average dilution in calculating Chlordane/Dieldrin limits.
Page 17, Part iv.	• The proposed maximum daily effluent limitation for Dieldrin should be 0.35 µg/L not 0.22 µg/L.
Page 18, Section D.2.e, Nutrients	• The RPA for ammonia nitrogen is based on the conclusion that assimilative capacity does not exist. There is no effluent data to support that conclusion. The rationale for imposing a limit fails to consider the state of

	current wastewater treatment technology.
Page 21	• The Fact Sheet imposes two different geometric means of 6,510 CFU and 10,290 CFU. • The receiving waters data from March 2008 to October 2012 indicates that there were no exceedances of enterococcus at the edge of the mixing zone. There is no reasonable potential to cause or contribute to an exceedance of the water quality criteria for enterococcus. • The DOH permit failed to consider average dilution and enterococcus die-off in calculating enterococcus limits. There is no basis for imposing enterococcus limits as receiving water data indicated there were no exceedances of enterococcus at the edge of the mixing zone.
Page 24	• The current plant design flow rate is 15.25 MGD and therefore mass-based effluent limitations in the permit should be based on 15.25 MGD, not an annual average flow of 12.7 MGD from the previous permit.
Pages 27, Section D.2.b, Table F-10	• Footnote 3, HAR 11-54-8 (b) previous water quality standard of geometric mean of 7 CFU/100mL for marine recreational waters within 300 meters (1,000 feet) of shore was not applicable to nearshore stations.
Pages 28, Section D.2.c, Table F-11	• Footnote 3, HAR 11-54-8 (b) previous water quality standard of geometric mean of 7 CFU/100mL for marine recreational waters within 300 meters (1,000 feet) of shore was not applicable to offshore stations.

Page	Comment
Comments for NPDES Standard Conditions - NPDES Application, Permit No. HI 0021296	
Page 3, Condition 3.b(2)	• Reference is outdated. As referenced in HAR 11-55, Appendix A, the Third Edition of Water Measurement Manual was published in 2001.
Page 14, Condition 14.d	• Condition fails to track the language of 40 CFR 122.41(j)
Page 16, Condition 16.d(2)	• Condition fails to track the language of 40 CFR 122.41(l)

RECEIVING WATER QUALITY MONITORING PROGRAM

MOKAPU OCEAN OUTFALL

KAILUA WASTEWATER TREATMENT PLANT
DISCHARGE PERMIT NO. HI0021296

As of October 03, 2012

SHORELINE COORDINATES

STATIONS	LOCATION	LATITUDE	LONGITUDE
NORTH BEACH	North Beach (MCBH)	21E 27' 14.4" N 157	E 44' 24.0" W
MS1 (Fort Hase)	Fort Hase Cove (MCBH)	21E 26' 40.0" N 157	E 44' 10.6" W
MS2 (Kapoho Point)	Kapoho Point	21E 25' 30.8" N 157	E 44' 24.2" W
ONEAWA BEACH	Oneawa Beach	21E 25' 06.0" N 157	E 44' 39.3" W
KALAMA BEACH	Public access Kapaa St.	21E 24' 20.1" N 157	E 44' 19.9" W
MS3 (Kailua Beach)	Kailua Beach Park	21E 23' 54.8" N 157	E 43' 38.2" W
MS4 (Lanikai Boat Ramp)	Lanikai Boat Ramp	21E 23' 44.8" N 157	E 43' 19.7" W

Sample Type - Surface Grab
Sample Frequency - Five (5) days per month

NEARSHORE STATIONS

STATIONS	LOCATION	LATITUDE	LONGITUDE
MN1	Outside Pukaulua Point	21E 27' 49.7" N 157	E 43' 55.5" W
MN2	Outside Kii Point	21E 27' 08.0" N 157	E 43' 13.3" W
MN3	Outside Old Kailua Outfall	21E 25' 48.9" N 157	E 43' 50.2" W
MN4	Outside Kailua Beach	21E 24' 32.0" N 157	E 43' 19.1" W

Sample Type - Surface and Bottom Grab
Sample Frequency - Five (5) days per month

OFFSHORE STATIONS

STATIONS	LOCATION	LATITUDE	LONGITUDE
M1 Upcoast reference	North of ZOM boundary	21E 28' 13.4" N 157	E 43' 55.9" W
M2	North ZOM boundary	21E 27' 18.4" N 157	E 42' 54.9" W
M3	East ZOM boundary	21E 27' 17.0" N 157	E 42' 44.1" W
M4	South ZOM boundary	21E 27' 03.3" N 157	E 42' 54.7" W
M5	West ZOM boundary	21E 27' 08.7" N 157	E 43' 06.2" W
M6 Far-field	South of ZOM boundary	21E 26' 35.6" N 157	E 42' 55.1" W

Sample Type - Surface, Mid-depth, and Bottom Grab Sample
Frequency – Monthly

SEDIMENT STATIONS

STATIONS	LOCATION	LATITUDE	LONGITUDE
MKP-A		21E 27' 45.6" N 157	E 42' 43.6" W
MKP-B1		21E 27' 15.1" N 157	E 42' 51.2" W
MKP-Z		21E 27' 14.3" N 157	E 42' 50.6" W
MKP-B2		21E 27' 13.4" N 157	E 42' 50.3" W
MKP-C		21E 26' 58.3" N 157	E 42' 54.9" W
MKP-D		21E 25' 32.3" N 157	E 42' 53.6" W

Sample Type – Diver Core
Sample Frequency – Every 5 Years